

Interleaving Strings [\(View\)](#)

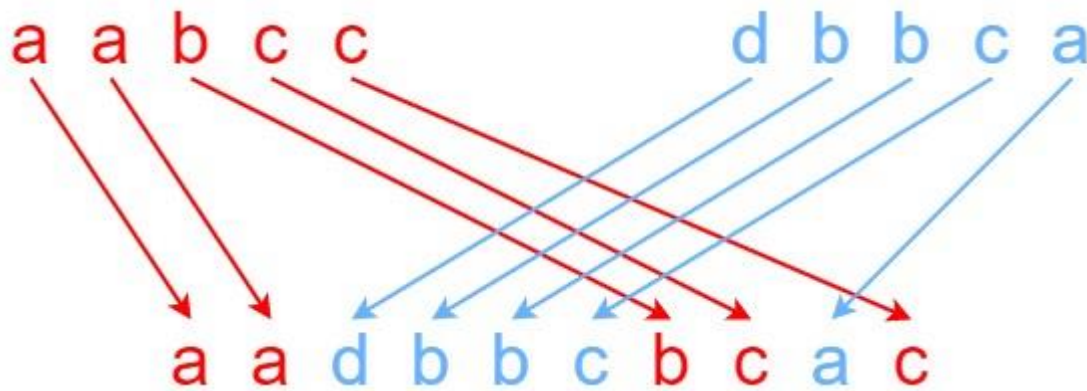
Given strings `s1`, `s2`, and `s3`, find whether `s3` is formed by an **interleaving** of `s1` and `s2`.

An **interleaving** of two strings `s` and `t` is a configuration where they are divided into **non-empty** substrings such that:

- $s = s_1 + s_2 + \dots + s_n$
- $t = t_1 + t_2 + \dots + t_m$
- $|n - m| \leq 1$
- The **interleaving** is $s_1 + t_1 + s_2 + t_2 + s_3 + t_3 + \dots$ or $t_1 + s_1 + t_2 + s_2 + t_3 + s_3 + \dots$

Note: `a + b` is the concatenation of strings `a` and `b`.

Example 1:



Input: `s1 = "aabcc"`, `s2 = "dbbca"`, `s3 = "aadbcbcbac"`

Output: `true`

Example 2:

Input: `s1 = "aabcc"`, `s2 = "dbbca"`, `s3 = "aadbbaaccc"`

Output: `false`

Example 3:

Input: `s1 = ""`, `s2 = ""`, `s3 = ""`

Output: `true`

Constraints:

- `0 <= s1.length, s2.length <= 100`
- `0 <= s3.length <= 200`
- `s1`, `s2`, and `s3` consist of lowercase English letters.

Follow up: Could you solve it using only `O(s2.length)` additional memory space?